## PATENT COOPERATION TREATY

## **PCT**

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| Applicant's or agent's file reference  | (Form PO)  | ation of Transmittal of International Search Report<br>(/ISA/220) as well as, where applicable, item 5 below.  |
|--|--|--|
| S1680150   | ACTION   | The state of the s |
| International application No.  | international filing date (day/month/)re   | (Earliest) Priority Date (day/month/year)  |
| PCT/CA 03/00330  | 11/03/2003   | 11/03/2002   |
| Applicant  | ;  |  |
| SIMON FRASER UNIVERSITY  |  |  |
| This international Search Report has been according to Article 18. A copy is being tra       | n prepared by this international Searchi<br>unamitted to the international Bureau.     | ng Authority and is transmitted to the applicant   |
| This international Search Report consists  X It is also accompanied by                       | of a total of sheets a copy of each prior art document clied                           | •  |
|  | 4  |  |
| 1. Basis of the report   |  | M. A. A. A. A. M. A.   |
| <ul> <li>With regerd to the language, the<br/>language in which it was filed, uni</li> </ul> | international search was carried out of<br>ass otherwise indicated under this item.    | the basis of the international application in the  |
| the international search w<br>Authority (Rule 23.1(b)).                                      | as carried out on the basis of a translat  | ion of the International application furnished to this   |
| was carried out on the basis of th   |  | n the International application, the International search  |
| . =  | ernational application in computer reada   | ble form.  |
| <u> </u>   | this Authority in written form.  |  |
|  | this Authority in computer readble form  | 1.   |
| X the statement that the sul   |  | listing does not go beyond the disclosure in the   |
|  |  | e form is identical to the written sequence listing has been   |
| _  | . 1  |  |
| 2. Certain claims were fou   | nd unesarchable (See Box I).   |  |
| 3. Unity of invention is lac   | string (see Box II).   |  |
|  |  |  |
| 4. With regard to the title,   | shoulted by the confloant  | ·  |
| ا استا   | abmitted by the applicant.   | _  |
| the text has been establis   | shed by this Authority to read as follows  | <b>,</b>   |
| 5. With regard to the abstract,  | •  |  |
| x the text is approved as a  | ubmitted by the applicant.   |  |
| the text has been establi<br>within one month from th  | shed, according to Rule 38.2(b), by this<br>e date of malling of this international ea | Authority as it appears in Box III. The applicant may,<br>arch report, submit comments to this Authority.  |
| 6. The figure of the drawings to be put  | olished with the abstract is Figure No.  | 1  |
| X as suggested by the app  | licant.  | None of the figures.   |
| because the applicant fa   | lied to suggest a figure.  |  |
| because this figure bette  | r characterizes the invention.   |  |
| [  | : 4  |  |

Form PCT/ISA/210 (first sheet) (July 1998)





International Application No PCT/CA 03/00330

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According to International Patent Classification (IPC) onto both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols))

C12Q IPC 7

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, MEDLINE, EMBASE, WPI Data, PAJ

| C. DOCUM   | ENTS CONSIDERED TO BE RELEVANT   | <u> </u>                         |   |
|------------|--|----------------------------------|---|
| Category * | Citation of document, with indication, where appropriate, of the relevant pass   | nages<br>:                       | Aetevant to dalm No.                        |
| X          | RAJSKI SCOTT R ET AL: "How different DNA-binding proteins affect long-range oxidative damage to DNA" BIOCHEMISTRY, vol. 40, no. 18, 8 May 2001 (2001-05-0 pages 5556-5564, XP002260671 ISSN: 0006-2960 | . i.                             | 1-7,15,<br>16,<br>21-25,<br>31,32,<br>35,36 |
| Υ .        | page 5560, right-hand column, last paragraph -page 5561, right-hand colum paragraph 1; figure 5  |                                  | 8,17-20,<br>29                              |
| X Furl     | her documents are listed in the continuation of box C.   | Perent family members are listed | in annex.                                   |

|   | Special categories of cited documents:   | "T' later document published after the international filing date  |
|---|--|---|
|   | "A" document defining the general state of the art which is not considered to be of particular relevance | or priority date and not in conflict with the application but<br>clied to understand the principle or theory underlying the<br>treatten |
|   | "E" earlier document but published on or after the international filling date                            | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to                       |
| i | *L* document which may throw coubts on priority claim(s) or  | involve an inventive step when the document is taken alone  |

occurrent of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents such combination being obvious to a person skilled in the art. which is clied to establish the publication date of another citation or other special reason (as specified) O' document reterring to an oral disclosure, use, exhibition or

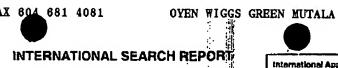
document published prior to the international filing date but later than the priority date claimed \*&\* document member of the same patent family

Date of mailing of the international search report Date of the actual completion of the international search

25/11/2003 7 November 2003 Authorized officer Name and mailing address of the ISA

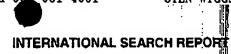
European Patent Office, P.B. 5618 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Yx. 31 651 epo nl. Fex: (+31-70) 340-3018 ALCONADA RODRIG.., A

Form PCT/ISA/210 (second phest) (July 1882)



International Application No

|            |   | PCT/CA 03/00330                  |  |
|------------|---|----------------------------------|--|
| •          | ation) DOCUMENTS CONSIDERED TO BE RELEVANT  |                                  |  |
| Seregory . | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.            |  |
| X          | US 6 221 586 B1 (BARTON JACQUELINE K ET AL) 24 April 2001 (2001-04-24)  column 6, line 65 -column 7, line 26 column 13, line 7-22   | 1-7,<br>9-16,<br>21-28,<br>30-34 |  |
| Y          | column 13, line 66 -column 14, line 36  | 8,17-20,<br>29                   |  |
| Y          | HUIZENGA D E ET AL: "A DNA APTAMER THAT<br>BINDS ADENOSINE AND ATP"<br>BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY,<br>EASTON, PA, US,<br>vol. 34, no. 2,<br>17 January 1995 (1995-01-17), pages<br>656-665, XP001031222<br>ISSN: 0006-2960<br>figure 7   | 8,29                             |  |
| Y          | ODOM DUNCAN T ET AL: "Charge transport through DNA four-way junctions" NUCLEIC ACIDS RESEARCH, vol. 29, no. 10, 15 May 2001 (2001-05-15), pages 2026-2033, XP002260672 ISSN: 0305-1048 abstract; figures 5,6  | 17-20                            |  |
| Ρ,Χ        | FAHLMAN RICHARD P ET AL: "DNA conformational switches as sensitive electronic sensors of analytes" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 124, no. 17, 1 May 2002 (2002-05-01), pages 4610-4616, XP002260673 ISSN: 0002-7863 the whole document   | 1-36                             |  |
| Т          | FAN CHUNHAI ET AL: "Electrochemical interrogation of conformational changes as a reagentless method for the sequence-specific detection of DNA." PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 100, no. 16, 5 August 2003 (2003-08-05), pages 9134-9137, XP002260674 August 5, 2003 ISSN: 0027-8424 (ISSN print) |                                  |  |
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information on patent family members

| International | Application No |  |
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| PCT/CA        | 03/00330       |  |

| Patent document<br>cited in search report |    | Publication<br>date |                            | Patent family . reamber(s)  | Publication data   |
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| US 6221586                                | B1 | 24-04-2001          | AU<br>EP<br>JP<br>WO<br>US | 3550699 A<br>1068359 A1<br>2002510791 T<br>9951778 A1<br>2002055103 A1<br>2002146716 A1 | 25-10-1999<br>17-01-2001<br>09-04-2002<br>14-10-1999<br>09-05-2002<br>10-10-2002 |
|   |    |                     | <del></del> -              |   | . <del> </del>   |